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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,081	03/13/2001	Fumihiro Arakawa	DAIN:580	9115

7590

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EXAMINER

AMARI, ALESSANDRO V

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/804,081

Applicant(s)

ARAKAWA ET AL.

Examiner

Alessandro V. Amari

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7, 12 drawn to an antireflection film, classified in class 359, subclass 600+.
 - II. Claim 8 -11, drawn to a process for producing an antireflection film, classified in class 359, subclass 580.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be made by sputtering.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

2. During a telephone conversation with Mr. C. Wendel on 4/26/02 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7, 12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named

inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1, 2, 6, 7, and 12 rejected under 35 U.S.C. 102(e) as being anticipated by Maekawa U.S. Patent 6,217,176.

In regard to claim 1, Maekawa discloses (see Figure 1) an antireflection film comprising: a transparent layer (14) formed of a cured product of an ionizing radiation-curable resin composition as described in column 5, lines 6-11; and a concave-convex portion provided on one side of the transparent layer as shown in Figure 1 and as described in column 6, lines 60-67 and column 7, line 1, the concave-convex portion comprising fine concaves and convexes provided at a pitch of not more than the wavelength of light as described in column 6, lines 31-43. Inherently, the particles that form the concaves and convexes meet the limitation of being provided

at a pitch of not more than the wavelength of light since the particles have a diameter of 1 to 5 micrometers (i.e., infrared light) and are monodispersed in the resin.

Regarding claim 2, Maekawa discloses (see Figure 1) that the transparent layer is backed by a transparent substrate film (12) as described in column 3, lines 34-38.

Regarding claim 6, Maekawa discloses (see Figure 2) a polarizing element comprising: a polarizing plate (22); and, stacked on the polarizing plate, the antireflection film (11) as described in column 7, lines 20-24.

Regarding claim 7, Maekawa discloses (see Figure 3) a display device comprising: a display section (34); and, stacked or disposed on the display section in its viewer side, the antireflection film (32 which is same as 20 in Figure 2) as described in column 7, lines 53-59.

Regarding claim 12, Maekawa discloses (see Figure 3) a display device comprising: a display section (34); and, stacked or disposed on the display section in its viewer side, the polarizing element (32 which is same as 20 in Figure 2) as described in column 7, lines 53-59.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa U.S. Patent 6,217,176 in view of Ota et al. U.S. Patent 5,925,438.

Regarding claim 3, Maekawa teaches the invention as set forth above but does not teach that the transparent layer has a surface hardness of not less than H in terms of pencil hardness. Ota et al. does teach that the transparent layer has a surface hardness of not less than H in terms of pencil hardness as described in column 3, lines 26-36. It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the transparent layer as taught by Ota et al. in the film of Maekawa in order provide the necessary rigidity and backing for the film.

Regarding claim 4, Maekawa teaches the invention as set forth above but does not teach that provided on the concaves and convexes, a layer formed of a resin composition having lower light refractive index than the transparent layer. Ota et al. does teach (see Figure 2) that provided on the concaves and convexes, a layer (3) formed of a resin composition having lower light refractive index than the transparent layer as described in column 2, lines 57-58 and 66-67. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the layer having lower light refractive index than the transparent layer as taught by Ota et al. in the film of Maekawa in order to increase the antireflective properties of the film.

Regarding claim 5, Maekawa teaches the invention as set forth above but does not teach that the antireflection film has antistatic properties. Ota et al. does teach that the antireflection film has antistatic properties as described in column 11, lines 23-30. It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the film of Maekawa to incorporate the antistatic properties as taught by Ota et al. in order to prevent deposition of dusts on the film.

Conclusion

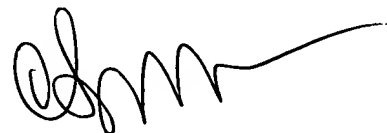
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It should be noted that Satoh et al. U.S. Patent 5,847,795 teaches (see Figure 6) an antireflection film with concave-convex portions provided at a pitch of not more than the wavelength of light which is used with a polarizing element and in a display device.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (703) 306-0533. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ava *ava*
April 30, 2002



**Cassandra Spyrou
Supervisory Patent Examiner
Technology Center 2800**